



Natural Heritage & Endangered Species Program

Massachusetts Division of Fisheries & Wildlife
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Britton's Violet *Viola brittoniana*

State Status: **Threatened**
Federal Status: None

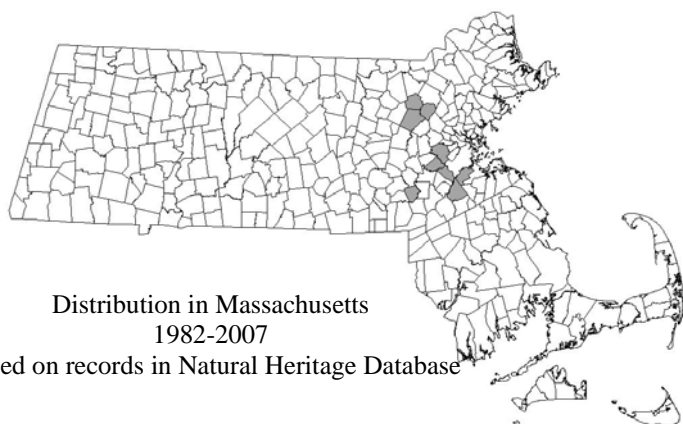
Description: Britton's Violet (*Viola brittoniana*) is a low-growing, herbaceous perennial found within or at the edges of floodplains of freshwater rivers. It has variably dissected leaves, and purple flowers that bloom from the middle of May to early June.

Aids to identification: Britton's Violet grows 5 to 10 inches (12–25 cm) in height and has basal leaves arising directly from a rhizome. Two varieties of Britton's Violet (and their hybrids) are currently recognized and protected here: *V. brittonia* var. *brittoniana* and *V. brittoniana* var. *pectinata*. (Some authors consider these taxa separate species; this question is currently under evaluation by NHESP). The nominate variety has consistently dissected leaves, usually deeply dissected into three lobes; the center lobe is usually further divided into three sublobes, and the lateral ones into three or four sublobes. In *V. brittoniana* var. *pectinata*, the leaves are narrowly to (increasingly through the season) broad-triangular and uncut but with long-toothed margins, especially toward the base. In both varieties, closed, self-fertilizing (cleistogamous) flowers appear above ground but below the taller leaves during June and July. Fruits produced from both flower types are similar, round to ovoid dark tan capsules that become upright and split into three parts when mature. Forcible ejection of the seeds has been observed up to 9 feet (3 m) from the plant. Seeds are further dispersed by ants.



Gleason, H.A. 1952. *The New Britton and Brown Illustrated Flora of the Northeastern United States and Adjacent Canada*. Published for NY Botanical Garden by Hafner Press. New York.

Similar species: Several other violets occur intermingled with or near Britton's Violet populations. Bird's Foot Violet (*V. pedata*) is the only other species with deeply dissected leaves. In this species, leaves are divided into as many as 15 narrow segments. Leaves of other violets with purple flowers have different leaf morphology: Marsh Blue Violet (*V. cucullata*) has heart-shaped unlobed leaves; Early Blue Violet (*V. palmata*) has shallowly-lobed leaf sinuses; Arrow-leaved Violet (*V. sagittata*) has oblong to triangular leaves often with only basal lobes; Woolly Blue Violet (*V. sororia*) has kidney-shaped leaves. The nominate variety of Britton's Violet is known to hybridize with Marsh Blue Violet, Woolly Blue Violet and Arrow-leaved Violet; hybrids have unlobed early-season leaves and lobed later-season leaves.



Distribution in Massachusetts
1982-2007

Based on records in Natural Heritage Database

Petaliferous (Chasmogamous) Flowers Present in Mass.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Cleistogamous Flowers Present in Massachusetts

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form as these donations comprise a significant portion of our operating budget.

Habitat in Massachusetts: In Massachusetts Britton's Violet is found mostly between the upper part of the annually flooded zone and the 100-year flood line of freshwater rivers. The U.S. Fish and Wildlife Service classifies it as a facultative wetland species (FAC), indicating that it occurs equally often in wetland or upland areas of the floodplain. The wetlands are generally wet meadows. This terrestrial species occurs in two distinct habitats in Massachusetts: within mowed areas and along woodland trails (generally whose edges are occasionally mowed or cleared). The species is rare in Massachusetts because most of the suitable habitat has been altered by fill for development, floodplain diking, or conversion to or from agriculture.

Threats: Threats to Britton's Violet include disruptions to the natural hydrologic regime, changes in water quality due to sedimentation, trampling, and over-shading or competition from aggressive native and exotic invasive species. Glossy Buckthorn (*Frangula alnus*) is an exotic invasive species of particular concern at Britton's Violet habitat locations.

Range: The limited range of Britton's Violet extends from Massachusetts, Connecticut, and New York south to the Carolinas. It is also tracked as a rare in Connecticut, New York, Pennsylvania, North Carolina, and Virginia.

Population status in Massachusetts: Britton's Violet is listed under the Massachusetts Endangered Species Act as Threatened. All listed species are legally protected from killing, collection, possession, or sale, and from activities that would destroy habitat and thus directly or indirectly cause mortality or disrupt critical behaviors. It is currently known from Middlesex, Norfolk, and Suffolk Counties, and is historically known from Plymouth County.

Management recommendations: As with many rare species, the exact management needs of Britton's Violet are unknown. This species apparently does not compete well in successional areas; germination occurs in recently disturbed areas, but plants die out as taller native and exotic species become established. Successful management may include periodic mechanical removal of dense competing vegetation, and targeted treatment for particularly insidious invasive species. All active management of rare plant populations (including invasive species removal) should be planned in consultation with the Massachusetts Natural Heritage & Endangered Species Program to avoid inadvertent damage to rare species.

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